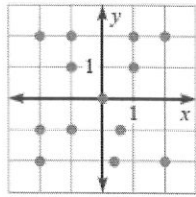


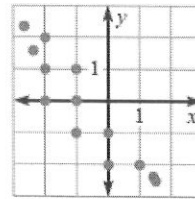
Name _____

____ 27) Which scatter plot shows a positive relationship between x and y ?

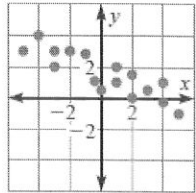
A)



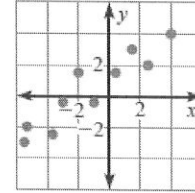
B)



C)



D)



Part 4.7 – Applications of Linear Functions

____ 38) A plant is 3 inches tall when you purchase it and grows 2 inches per month. Write an equation that represents the length l (in inches) of a plant that you purchased t months ago.

A) $l = 3t + 2$

B) $l = 2t + 3$

C) $t = 3l + 2$

D) $t = 2l + 3$

____ 39) After a laptop is purchased, its value decreases by \$150 each year. After 2 years, the laptop is worth \$600. Which equation represents the value V (in dollars) of the laptop x years after it is purchased?

A) $V = -150x + 300$

B) $V = 900x - 150$

C) $V = -150x + 900$

D) $V = 150x + 900$

____ 40) An elevator in a tall building is at a point 180 above the ground. The elevator descends at a rate of 12 feet per second. Which equation represents how far above the ground the elevator is after descending for x seconds?

A) $y = -12x + 180$

B) $y = 12x - 180$

C) $y = -180x + 12$

D) $y = 180x - 12$

_____ 41) A craft fair promises to donate \$100 plus 3% of every \$12 ticket to a charity. Which equation represents the amount y of money the craft fair will give to the charity if x tickets are sold?

A) $y = 0.03x + 100$

B) $y = 0.03x + 112$

C) $y = 0.36x + 100$

D) $y = 3x + 100$

_____ 42) A swimmer is competing in the 50-meter butterfly race. The number of meters m that she has left to swim after t seconds is $m = -\frac{5}{3}t + 50$. After how many seconds will the swimmer reach the halfway point in the race?

A) 30

B) 15

C) 25

D) 100

Part 4.8 – Cumulative Review

_____ 43) Which of the following sentences is represented by this graph?



A) t is greater than -5 or less than -1

B) t is between -5 and -1

C) t is greater than -5 and less than -1

D) t is less than or equal to -1 and greater than -5

_____ 44) Which of the following equations represents the formula for the perimeter of a rectangle, $P = 2l + 2w$, solve for the length?

B) $l = P - \frac{w}{2}$

B) $l = \frac{P - w}{2}$

C) $l = \frac{P}{2} - w$

D) $l = 2(P - w)$

_____ 45) Which ordered pair is located on the y -axis?

B) (4, 0)

B) (-2, 2)

C) (5, -2)

D) (0, -6)

_____ 46) The slope of the line passing through the points (0, 5) and (0, -3) is _____?

A) positive

B) negative

C) zero

D) undefined

37) Which quadrant would the point $(-2, 4)$ be located?

- A) I B) II C) III D) IV

38) Solve: $\frac{3}{25} = \frac{d}{75}$

- A) 9 B) 62.5 C) 74.5 D) 225

39) The installation and set-up fees for cable internet come to \$150. The monthly cost for internet access is \$40 per month. Which function models the cost C of m months of internet service?

- A) $C = 150m + 40$ B) $C = -40m + 150$
C) $C = 40m + 150$ D) $m = 40C + 150$

40) Which equations has -2 as its solution?

- A) $4x + 2 = 5$ B) $4x - 2 = 5$
C) $4x - 2 = 5x$ D) $4 - 2x = 5x$

41) Which of the following relations is NOT a function?

- A) $\{(6, 5), (1, 4), (5, -3), (3, 2), (-1, 5)\}$
B) $\{(1, 2), (-2, 5), (3, 5), (4, 5), (2, 5)\}$
C) $\{(2, -5), (1, -2), (6, -5), (3, -1), (1, 2)\}$
D) $\{(1, 9), (2, -2), (-5, -2), (3, -3), (7, 2)\}$

42) Find $f(-3)$ when $f(x) = x^2 - 4x$

- A) 21 B) 3 C) -3 D) -21

43) The ordered pair $(-3, 5)$ is a solution of which equation below?

- A) $y = 5$ B) $y = -\frac{1}{2}x - 2$ C) $y = \frac{1}{2}x - 2$ D) $x = 5$

44) What is the slope of the line passing through the points $(-3, 4)$ and $(5, -11)$?

- A) $-\frac{7}{8}$ B) $-\frac{7}{2}$ C) $-\frac{15}{8}$ D) $\frac{15}{8}$

_____ ~~45~~ 55) The value of a diamond ring increases at a constant rate. After 2 years, the value of the ring is \$1500. After 3 more years, the value of the ring is \$2025. Which linear equation represents the value y (in dollars) of the ring after x years?

A) $y = 175x + 1150$

B) $y = 1150x + 175$

C) $y = 525x + 450$

D) $y = -525x + 2550$

_____ ~~46~~ 56) Suppose the line through points $(x, 6)$ and $(1, 2)$ is parallel to the graph of $2x + y = 3$. What is the value of x ?

A) -2

B) -4

C) -1

D) 3

_____ ~~47~~ 57) The number 8.375×10^{-3} is equivalent to...

A) 0.0008375

B) 0.008375

C) 0.08375

D) $8,375$

_____ ~~48~~ 58) Solve the inequality: $\frac{1}{2}a + 3 < 2a - 6$

A) $a < -\frac{5}{6}$

B) $a < 6$

C) $a > -\frac{5}{6}$

D) $a > 6$

_____ ~~49~~ 59) Mr. Turner bought x boxes of pencils. Each box holds 25 pencils. He left 3 boxes of pencils at home and took the rest to school. Which expression represents the total number of pencils he took to school?

A) $22x$

B) $25x - 3$

C) $25 - 3x$

D) $25x - 75$

_____ ~~60~~ 60) Which number is irrational?

A) $\sqrt{9}$

B) $\sqrt{8}$

C) 0.3333

D) $\frac{2}{3}$